## **CLAIMS**

1. The compound of formula (IV):

- 5 in the form of either one of its two pure enantiomers, of racemic mixtures, or of mixtures enriched in either of its two enantiomers, as well as its salts, solvates and hydrates.
- 2. A method of production of the compound of claim 1, characterized in that it comprises reaction of a compound of formula (VII)

HO 
$$CO_2R$$
 $(VII)$   $R^2$ 

in which: R can be hydrogen or a  $C_1$ - $C_4$  alkyl group;

R<sup>1</sup> and R<sup>2</sup> can be, without distinction, hydrogen or an aryl group of formula

$$R^3$$

in which  $R^3$  and  $R^4$  can be, without distinction, hydrogen, or a  $C_1\text{--}C_6$  alkyl group, or a  $C_1\text{--}C_4$  alkoxy group;

with the condition that  ${\bf R}^1$  and  ${\bf R}^2$  cannot both be hydrogen,

with a compound of formula (III)

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in which Z is a leaving group, to obtain the compound of formula (VIII)

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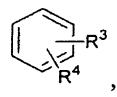
$$\bigcap_{N} \bigcap_{O} \bigcap_{N} \bigcap_{R^2}^{CO_2R} (VIII)$$

5 which, subsequently, is submitted to deprotection of the amino group and hydrolysis of the ester group.

3. A method according to claim 2, characterized in that R is the methyl group.

4. A method according to claims 2 and 3, characterized in that Z is a sulphonic ester.

- 5. A method according to any one of the claims 2 to 4, characterized in that Z is the methanesulphonyl (mesyl) group.
- 6. A method according to any one of the claims 2 to 5, characterized in that  $R^1$  is hydrogen and  $R^2$  is an aryl group of formula



in which  $R^3$  and  $R^4$  can be, without distinction, hydrogen, a  $C_1\text{--}C_6$  alkyl group or a  $C_1\text{--}C_4$  alkoxy group.

7. A method according to any one of the claims 2 to 6, characterized in that  $R^1$  is hydrogen and  $R^2$  is phenyl.

8. A method according to any one of the claims 2 to 7, characterized in that it comprises reaction of the compound of formula

5 with the compound of formula

to obtain the compound of formula

- 10 which, subsequently, is submitted to deprotection of the benzylideneamino group and hydrolysis of the methyl ester.
- 9. A method according to any one of the claims 2 to 8, 15 characterized in that in addition it comprises the following stages for production of pioglitazone (I):
  - (a) bromination of compound (IV) to obtain the compound of formula (XI)

20 (b) condensation of compound (XI) with thiourea to obtain the compound of formula (XII)

- (c) hydrolysis of compound (XII) to obtain pioglitazone.
- 10. Use of the compound of claim 1 in the preparation
  5 of pioglitazone.